REMARKS

The 20 November 2003 official action addressed claims 1-2, 5-14, 17-51, 54-62 and 65-71. Claims 1, 13, 25, 39-42, 45-46, 50 and 61 are amended.

Overview of amendments

Independent claims 1 and 13 are amended to clarify that they are directed to creating closed caption data from script data.

Claims 25 and 39 are amended to clarify that they involve timing data corresponding to program segments.

Editorial amendments are made to claims 40, 41, 42, 45 and 46.

Claims 50 and 61 are amended to specify that programs segments are identified through analysis of production system data, and to clarify that a video signal is created for a video program.

No new matter is added.

Response to objections and rejections

1. Closed caption data creation claims

Claims 1-2, 5, 7-14, 17, 19-24, 47-51, 54-62 and 65-71 were rejected under 35 USC §103(a) as being obvious over Henmi (U.S. 5,390,027) in view of Menard (U.S. 6,061,056). Claims 6 and 18 were rejected as being obvious over Henmi, Menard and Shriver (U.S. 6,290,359).

These claims relate to the creation of closed caption data that includes identifiers and timing markers for individual segments of a video program, and to media storing such data. The official action requires applicants to distinguish these claims from the combined technologies of Henmi, Menard and Shriver. In response, applicants have made minor amendments to clarify that the present claims are devoted to the *creation* of closed caption data for a video program. In contrast, Henmi and Menard are directed to uses of closed caption data in home media devices, and Shriver is directed to a teleprompter system that has

no connection to a closed caption data creation system. One of ordinary skill would distinguish between the creation of closed caption data at a video production facility and the use of that data in home media devices that receive television broadcasts, and would not arrive at the claimed technology by following the teachings of the cited references.

In responding to the rejection, applicants rely on the following guidelines concerning the interpretation of claim terms:

> Claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving them their 'broadest reasonable interpretation'. MPEP 2111.01 (emphasis in original)
>
> The broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. MPEP 2111
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> Reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from 'reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim. MPEP 2111
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> A claim preamble has the import that the claim as a whole suggest for it. ... If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim. MPEP 2111.02

Applicants also rely on the following guidelines concerning the requirements for an obviousness rejection:

> To establish a prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP 2143.03
>
> All words in a claim must be considered in judging the patentability of that claim against the prior art. MPEP 2143.03
>
> A prior art reference must be considered in its entirety, i.e. as a whole, including portions that would lead away from the claimed invention. MPEP 2141.02 (emphasis in MPEP)

The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention. MPEP 2141

Claims 1 and 13

"receiving script data ... from a production system..."

The claims specify that script data is obtained from a production system used in the production of a programming event. Paragraphs 54-58 of the application (published version) describe characteristics of the production systems and production data referred to in the claims. The application names the ENPS system as an example of a system used in video production facilities such as television studios to produce video programming events. Figures 3 and 4 show examples of production data produced by the ENPS system.

One of ordinary skill, having read the application, would understand the claim term "production system" to refer to a system such as the ENPS system which is used in the *production* of a video program, and would understand the term "receiving script data ... from a production system" to refer to obtaining data from this type of system, particularly in light of the claim preamble which specifies that the claim applies to "a method in a video production facility system."

Henmi does not involve receiving script data from a production system. In Henmi, a recording device such as a VCR receives a broadcast television signal that includes program data in the vertical blanking interval. One having ordinary skill in the art would not consider this to constitute receiving script data from a production system, but instead would consider it to be receiving a broadcast signal from a broadcaster. One of ordinary skill also would not consider "script data" to be the same as closed caption data, particularly since the claim also refers to closed caption data created from the script data, indicating that the terms refer to different things.

Menard does not involve receiving script data from a production system. In Menard, a home media device receives a broadcast television signal that

includes closed caption data. Again, one having ordinary skill would not consider this to constitute receiving script data from a *production system*, and would also not consider "script data" to be the same as closed caption data.

"determining identifiers of each of multiple segments of the program."

Applicants agree with the examiner's observation that Henmi does not teach receiving data for segments of a program.

Menard does not involve determining identifiers for each of multiple segments of a program. Menard analyzes closed caption data to recognize matches between the closed caption data in the received broadcast and keywords provided by a user, and notes the times at which matches occur (see col. 5, lines 25-30; col. 6, lines 4-11 and 47-49). Menard does not determine identifiers for individual segments of the program.

"creating closed caption data for the program ..."

The claims specify that closed caption data is *created* for the program from the script data, and that the closed caption data includes text, timing data for the beginning of each individual segment, and an identifier of each individual segment. One of ordinary skill would understand these limitations refer to the initial creation of closed caption data having these features, and would distinguish the creation of this data from the receipt of the already-created data in a broadcast signal by an end-user device.

Henmi does not teach the creation of closed caption data. Henmi teaches an end user device such as a VCR that receives a broadcast signal containing closed caption data. One of ordinary skill would not consider this to constitute creating closed caption data, but rather simply receiving the previously created closed caption data contained in the broadcast signal.

Menard also does not teach the creation of closed caption data. Menard teaches an end user device that receives a broadcast signal containing closed caption data, and analyzes the data for occurrences of keywords specified by a user. One of ordinary skill would not consider this to constitute creating closed

caption data, but rather simply receiving the previously created closed caption data contained in the broadcast signal.

Applicants therefore respectfully assert that the cited references do not teach any of the features required by claims 1 and 13. The claims involve end-user devices and do not suggest the claimed features or any features that are relevant to creation of closed caption data in a production facility system.

Claims 6 and 18

These claims specify that the transmission of closed caption data is synchronized to the transmission of program segments by synchronizing the transmission of the closed caption data to the display of corresponding text on a teleprompter.

The term teleprompter is a term of art that would be understood by one of ordinary skill in the art to refer to a device that displays text to a person who is reading the text during production of a video program, such as a television news broadcast.

The official action states that Henmi (Fig. 8) and Menard (Fig. 1) both teach a teleprompter. However Henmi's Figure 8 shows a "television program recording and reproducing system" which is described elsewhere in the text as a VCR connected to a television. Menard's Figure 1 shows a "multimedia display" that is implemented as a television connected to a television signal tuner. One of ordinary skill would not consider this type of home media equipment to constitute a teleprompter.

The official action notes that Shriver also teaches a teleprompter system and concludes that it would be obvious to use a teleprompter to assist a person reading text in the video program. Applicants note that the claim requires transmission of closed caption data that is synchronized to the action of the teleprompter. This features is not found in any of the cited references.

Claims 2, 5-12, 14 and 15-24

These claims depend from independent claims 1 and 13 and are distinguished from the cited references for the reasons stated with respect to

claims 1 and 13 as well as for the additional features recited therein, some of which are highlighted above.

Claims 50 and 61:

"identifying each of multiple segments ... from *production system data received from a production system* used to produce the video program..."

The claims specify that production system data is obtained from a production system used in the production of a programming event. Paragraphs 54-58 of the application (published version) describe characteristics of the production systems and production data referred to in the claims. The application names the ENPS system as an example of a system used in video production facilities such as television studios to produce video programming events. Figures 3 and 4 show examples of production data produced by the ENPS system.

One of ordinary skill, having read the application, would understand the claim term "production system" to refer to a system such as the ENPS system which is used in the *production* of a video program, and would understand the term "production system data received from a production system" to refer to data obtained from this type of system, particularly in light of the claim preamble which specifies that the claim applies to "a method in a video production facility system."

Henmi does not involve production system data received from a production system. In Henmi, a recording device such as a VCR receives a broadcast television signal that includes program data in the vertical blanking interval. One having ordinary skill in the art would not consider this to constitute receiving production data from a production system, but instead would consider it to be receiving a broadcast signal from a broadcaster. One would also not consider "production data" to be the same as closed caption data, since production data is generated in a production system, and closed caption data is received in the broadcast signal by the end user.

Menard does not involve production system data received from a production system. In Menard, a home media device receives a broadcast

television signal that includes closed caption data. Again, one having ordinary skill would not consider this to constitute production system data received from a *production system*, and would also not consider "production data" to be the same as closed caption data.

"identifying each of multiple segments through analysis of *production system data* ..."

Neither Henmi nor Menard receives production system data from a production system and so this task is not performed by either Henmi or Menard.

"determining identifiers of each of multiple segments of the program."

Applicants agree with the examiner's observation that Henmi does not teach receiving data for segments of a program.

Menard does not involve determining identifiers for each of multiple segments of a program. Menard analyzes closed caption data to recognize matches between the closed caption data in the received broadcast and keywords provided by a user, and notes the times at which matches occur (see col. 5, lines 25-30; col. 6, lines 4-11 and 47-49). Menard does not determine identifiers for individual segments of the program.

"creating a video signal ... comprising timing data provided at locations corresponding to beginnings of each of the multiple segments ..."

The claims specify that a video signal representing the video program is created, and that it includes timing data indicating the beginnings of individual segments of the program. One of ordinary skill would distinguish the act of creating a video signal from the act o receiving a video broadcast, particularly in view of the claim preamble which specifies that the claim is directed to "a method in a video production facility system for producing a video." One of ordinary skill would also understand this task to involve creation of a signal that represents both the video component of the program and the timing data indicating particular segments as previously identified by the process.

Henmi does not teach the creation of a video signal or timing data in a video signal. Henmi teaches an end user device such as a VCR that receives a broadcast signal containing closed caption data. One of ordinary skill would not consider this to constitute *creating* a video signal, but rather simply receiving a previously created video signal. Further the video signal does not include timing data indicating the beginnings of segments of the video program, and Henmi's device does not create such data.

Menard also does not teach the creation of a video signal or timing data in a video signal. Menard teaches an end user device that receives a broadcast video signal containing closed caption data, and analyzes the data for occurrences of keywords specified by a user. One of ordinary skill would not consider this to constitute *creating* a video signal that includes timing data, but rather would consider it to constitute receiving a signal that was previously created and does not contain any timing data. Further, Menard does not create timing data for segments of a program, rather Menard simply notes the times when certain keyword phrases occur in the closed caption data. Menard also does not create a video signal that includes those times, rather the times are stored in a database.

Claims 51, 54-60, 62 and 65-71

These claims depend from independent claims 50 and 61 and are distinguished from the cited references for the reasons stated with respect to claims 50 and 61 as well as for the additional features recited therein, some of which are highlighted above.

Claims 47-49

Claims 47-49 pertain to a stored video program that includes closed caption data. The closed caption data includes timing data that indicates the beginning of each of multiple segments of the video program.

As discussed above, neither of the cited references teaches closed caption data that contains within itself timing data indicating the beginnings of individual segments of a program. Henmi teaches receiving closed caption data

that only indicates the beginnings of programs. Menard teaches receiving closed caption data and analyzing it for the presence of keywords. The person of ordinary skill would not understand the closed caption data of the cited references to contain timing data indicating the beginnings of individual segments as required by these claims.

Therefore claim 47 and claims 48-49 are distinguished from the cited references.

2. Closed caption data synchronization claims

Claims 25-37 and 39-45 were rejected under 35 USC §103(a) as being obvious over Van Thong (U.S. 6,442,518) in view of Shriver (U.S. 6,290,359). Claims 38 and 46 were rejected as being obvious over Van Thong, Shriver and Brothers (U.S. 5,799,083).

These claims relate to the alignment of closed caption data transmission to a corresponding video program by synchronizing the closed caption data to the display of corresponding text on a teleprompter used in the production of the video program. The official action requires applicants to distinguish these claims from the combined technologies of Van Thong, Shriver and Brothers. In response, applicants have made amendments to claim 39 to specify that a synchronizing device is used to synchronize the closed caption data to the video signal during production of the video program in accordance with display of corresponding text on a teleprompter to a person reading the text. Van Thong describes alignment of closed caption data but does so based on signal processing and speech recognition of the audio signal. Shriver discloses a teleprompter but does not suggest synchronization of closed caption data to a video signal based on the operation of the teleprompter. Applicants have also made amendments to claims 25 and 39 to clarify that timing data is provided in closed caption data for individual program segments within a program. The cited references also do not describe closed caption data that contains timing data indicating the beginnings of individual program segments within the program.

Claims 25 and 39:

"closed caption data comprising ... timing data ... provided at locations in the closed caption data corresponding to beginnings of program segments ..."

The claims require the production or use of closed caption data that contains timing data indicating the beginnings of program segments within the program.

Van Thong utilizes closed caption data that contains markers indicating the times at which a portion of the closed caption text should appear and disappear. However the locations of these markers are arbitrary with respect to individual program segments. One having ordinary skill would consider the term "program segment" to refer to a segment of a program pertaining to a particular subject, as defined in the specification at paragraph 49 (published version). In view of this meaning, one having ordinary skill would not consider Van Thong's timing markers to correspond to program segments because the markers correspond to the times at which text is to be displayed and removed from the screen, and therefore they have no predictable relationship to the beginnings of individual segments and cannot be taken to indicate the start of a new segment.

Shriver has no teaching concerning timing data in closed caption data that indicates the beginnings of program segments.

"synchronizing the closed caption data in accordance with the display of corresponding text by a teleprompter ... "

The claims require that closed caption data is synchronized to the video signal for the program based on the display of text by a teleprompter used during production of the video program.

The official action cites Van Thong as teaching synchronization in accordance with display of closed caption text on a teleprompter. However the cited portions (col. 1, lines 9-15 and col. 2, lines 43-45) describe the conventional display of closed caption text on the television screen of a person watching a television program. One of ordinary skill in the field would not consider the conventional display of closed caption text on a television to constitute "synchronizing" the closed caption data to the video signal. As used

in the claims and in the application, synchronizing is the act of creating the time-wise relationship of the closed caption data and the video signal. The cited portion of Van Thong involves displaying closed caption text for which a time-wise relationship to a video signal has already been established (otherwise there would be no way of displaying the text in conjunction with the video). Although the cited portion of Van Thong states that "the closed captions typically appear and disappear at times that are roughly synchronized to words that are spoken in production," this does not describe the act of synchronizing, and there is no suggestion that a new time-wise relationship is established as a result of this display. Although the official action states that the display of closed caption text on a television is analogous to the use of a teleprompter, the claim requires that the act of synchronization of the closed caption data to the video signal is performed in accordance with the display of text by a teleprompter. One having ordinary skill would distinguish this act from the simple display of closed caption text on a television.

Shriver does not teach or suggest this feature of the claims.

Accordingly independent claims 25 and 39 are distinguished from the cited references.

Claims 26-38 and 40-46

These claims depend from independent claims 25 and 39 and are distinguished from the cited references for the reasons stated with respect to claims 25 and 39 as well as for the additional features recited therein.

The foregoing amendments and remarks address all bases for objection and rejection and are believed to place the case in condition for allowance. The examiner is invited to contact the undersigned to resolve any remaining issues.

Respectfully submitted,

Date: 20 May 2004
FOLEY & LARDNER LLP
Customer No. 23392
2029 Century Park East, 35th Floor
Los Angeles, CA 90067
Telephone: (310) 277-2223
Facsimile: (310) 557-8475

By _____

Ronald Coslick
Attorney for Applicant
Registration No. 36,489